

MANUFACTURE OF OXIDE SUPERCONDUCTING MATERIAL

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Abstract of JP7226317

PURPOSE: To enhance superconducting characteristics, thermal conducting properties and mechanical strength by easily forming an oxide superconducting material into spiral form by a method wherein a superconducting sheet, which is cut into the width suitable for cylindrical thin film ceramic, is wound with a proper space.

CONSTITUTION: A green sheet, which is cut in proper spiral width, is wound around a cylindrical thin ceramic with a proper space in the desired length. The diagram separately mentioned shows the side view of the current lead using a spiral-shaped oxide superconducting material which is treated by a doctor blade method. The green sheet is wound around a reinforcing member 6, the oxide superconducting material 5 is closely adhered by conducting a heat treatment and a pressure treatment, and an electrode 4 is formed on both ends. Consequently, as the oxide superconducting material 5 can be formed into spiral shape without having machine work, manufacturing time can be cut down, and the occurrence of breakage and cracks can be prevented. Also, the desired shape can be obtained without having restrictions in mechanical strength in the formation of special width and interval.

